

CLAIMS

What is claimed is:

- 1 1. A method for accelerated scanning, comprising:
 - 2 (a) identifying a file access pattern associated with data;
 - 3 (b) reading the data based on the file access pattern; and
 - 4 (c) performing a virus scan on the data.
- 1 2. The method as recited in claim 1, wherein if it is determined that the data does
2 not have the associated file access pattern, the data is read and a file access
3 pattern associated with the file is generated and stored.
- 1 3. The method as recited in claim 1, wherein if it is determined that the data does
2 not have the associated file access pattern, the data is read and the virus scan is
3 performed, after which it is determined whether the virus scan was slower than a
4 predetermined amount.
- 1 4. The method as recited in claim 3, wherein the file access pattern is conditionally
2 generated based on whether the virus scan was slower than the predetermined
3 amount.
- 1 5. The method as recited in claim 1, wherein the file access pattern includes a file
2 location.
- 1 6. The method as recited in claim 1, wherein the file access pattern includes a data
2 amount.

- 1 7. The method as recited in claim 1, wherein the data is read and scanned by
2 executing a first thread of operation for reading the data and a second thread of
3 operation for scanning the data.
- 1 8. The method as recited in claim 7, wherein the first thread of operation includes
2 retrieving the file access pattern, reading the data based on the file access
3 pattern, and caching the data.
- 1 9. The method as recited in claim 8, wherein the second thread of operation
2 includes determining whether the file access pattern is valid, and reading the
3 data from the cache if it is determined that the file access pattern is valid.
- 1 10. The method as recited in claim 8, wherein the second thread of operation
2 includes determining whether the data is available for being read from the cache,
3 and reading the data if the data is available for being read from the cache.
- 1 11. The method as recited in claim 1, and further comprising determining whether
2 the file access pattern is invalid.
- 1 12. The method as recited in claim 11, and further comprising deleting the file
2 access pattern if the file access pattern is determined to be invalid.
- 1 13. The method as recited in claim 12, and further comprising reading the data and
2 generating a file access pattern associated with the file if the file access pattern is
3 deleted.
- 1 14. A computer program product for accelerated scanning, comprising:
2 (a) computer code for identifying a file access pattern associated with data;

- 3 (b) computer code for reading the data based on the file access pattern; and
- 4 (c) computer code for performing a virus scan on the data.

1 15. The computer program product as recited in claim 14, wherein if it is determined
2 that the data does not have the associated file access pattern, the data is read and
3 a file access pattern associated with the file is generated and stored.

1 16. The computer program product as recited in claim 14, wherein if it is determined
2 that the data does not have the associated file access pattern, the data is read and
3 the virus scan is performed, after which it is determined whether the virus scan
4 was slower than a predetermined amount.

1 17. The computer program product as recited in claim 16, wherein the file access
2 pattern is conditionally generated based on whether the virus scan was slower
3 than the predetermined amount.

1 18. The computer program product as recited in claim 14, wherein the file access
2 pattern includes a file location.

1 19. The computer program product as recited in claim 14, wherein the file access
2 pattern includes a data amount.

1 20. The computer program product as recited in claim 14, wherein the data is read
2 and scanned by executing a first thread of operation for reading the data and a
3 second thread of operation for scanning the data.

- 1 21. The computer program product as recited in claim 20, wherein the first thread of
2 operation includes retrieving the file access pattern, reading the data based on
3 the file access pattern, and caching the data.
- 1 22. The computer program product as recited in claim 21, wherein the second thread
2 of operation includes determining whether the file access pattern is valid, and
3 reading the data from the cache if it is determined that the file access pattern is
4 valid.
- 1 23. The computer program product as recited in claim 21, wherein the second thread
2 of operation includes determining whether the data is available for being read
3 from the cache, and reading the data if the data is available for being read from
4 the cache.
- 1 24. The computer program product as recited in claim 14, and further comprising
2 computer code for determining whether the file access pattern is invalid.
- 1 25. The computer program product as recited in claim 24, and further comprising
2 computer code for deleting the file access pattern if the file access pattern is
3 determined to be invalid.
- 1 26. The computer program product as recited in claim 25, and further comprising
2 computer code for reading the data and generating a file access pattern
3 associated with the file if the file access pattern is deleted.
- 1 27. A system for accelerated scanning, comprising:
2 (a) logic for identifying a file access pattern associated with data;
3 (b) logic for reading the data based on the file access pattern; and

- 4 (c) logic for performing a scan on the data.

1 28. A method for accelerated scanning, comprising:

- 2 (a) reading data during a first thread of operation, wherein the data is cached during
3 the first thread of operation; and
4 (b) performing a virus scan on the data during a second thread of operation running
5 in parallel with the first thread of operation, wherein the data is read from the
6 cache during the second thread of operation.

1 29. A method for accelerated scanning, comprising:

- 2 (a) identifying data on a hard disk to be scanned for viruses;
3 (b) reading the data from the hard disk; and
4 (c) caching the scanned data for accelerating a virus scanning process involving the
5 data.

1 30. A method for reducing delay associated with reading data from memory during a
2 scan, comprising:

- 3 (a) initiating a scan;
4 (b) identifying a file to be scanned during the scan;
5 (c) determining whether the file has a file access pattern associated therewith;
6 (d) if it is determined that the file does not have the associated file access pattern,
7 (i) reading the data from the file,
8 (ii) scanning the data,
9 (iii) identifying a file access pattern associated with the file, and
10 (iv) storing the file access pattern;
11 (e) if it is determined that the file has the associated file access pattern, executing a
12 first thread of operation and a second thread of operation, the first thread of
13 operation including:

- 14 (i) retrieving the file access pattern,
- 15 (ii) identifying a file location and data amount of the file access pattern,
- 16 (iii) reading data from the file associated with the identified file location and
- 17 data amount,
- 18 (iv) caching the data, and
- 19 (iv) repeating (ii)-(iv); and
- 20 (f) said second thread of operation including:
 - 21 (i) determining whether the file location and data amount are valid,
 - 22 (ii) deleting at least a portion of the file access pattern associated with the
 - 23 file if it is determined that the file location and data amount are not valid,
 - 24 (iii) determining whether the data is available for being read from the cache,
 - 25 (iv) reading the data from the cache if it is determined that the file location
 - 26 and data amount are valid, and the data is available for being read from
 - 27 the cache, and
 - 28 (v) scanning the data.